From wang!elf.wang.com!ucsd.edu!info-hams-relay Tue Apr 2 03:40:23 1991 remote
from tosspot
Received: by tosspot (1.64/waf)
     via UUCP; Tue, 02 Apr 91 05:19:42 EST
     for lee
Received: from somewhere by elf.wang.com id aa06830; Tue, 2 Apr 91 3:40:22 GMT
Received: from ucsd.edu by relay1.UU.NET with SMTP
     (5.61/UUNET-shadow-mx) id AA05325; Mon, 1 Apr 91 21:46:12 -0500
Received: by ucsd.edu; id AA01372
     sendmail 5.64/UCSD-2.1-sun
     Mon, 1 Apr 91 16:19:41 -0800 for brian
Received: by ucsd.edu; id AA01354
     sendmail 5.64/UCSD-2.1-sun
     Mon, 1 Apr 91 16:19:32 -0800 for /usr/lib/sendmail -oc -odb -oQ/var/spool/
lqueue -oi -finfo-hams-relay info-hams-list
Message-Id: <9104020019.AA01354@ucsd.edu>
Date: Mon, 1 Apr 91 16:19:28 PST
From: Info-Hams Mailing List and Newsgroup <info-hams-relay@ucsd.edu>
Reply-To: Info-Hams@ucsd.edu
Subject: Info-Hams Digest V91 #258
To: Info-Hams@ucsd.edu

Info-Hams Digest   Mon, 1 Apr 91   Volume 91 : Issue 258

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text

herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 1 Apr 91 23:36:36 GMT
From: sdd.hp.com!zaphod.mps.ohio-state.edu!magnus.acs.ohio-state.edu!tut.cis.ohio-state.edu!n8emr!gws@ucsd.edu
Subject: AMSAT ORBITAL ELEMENTS
To: info-hams@ucsd.edu

```
============================================================
|         Relayed from AMSAT BBS  NETWORK                  |
| N8EMR's Ham BBS, 614-895-2553 1200/2400/9600/V.32/PEP/MNP5 |
============================================================

SB KEPS @ AMSAT  $ORBS-089.O
Orbital Elements  089.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
FROM N3FKV  HEWITT, TX     March 30, 1991
TO ALL RADIO AMATEURS BT

Satellite: AO-10
Catalog number: 14129
Epoch time:      91087.13157047
Element set:     643
Inclination:       25.8083 deg
RA of node:       153.6070 deg
Eccentricity:    0.6004385
Arg of perigee:   228.6767 deg
Mean anomaly:      61.5135 deg
Mean motion:    2.05883150 rev/day
Decay rate:       -9.0e-07 rev/day^2
Epoch rev:            3058

Satellite: UO-11
Catalog number: 14781
Epoch time:      91087.59505918
Element set:     947
Inclination:       97.9121 deg
RA of node:       135.3744 deg
Eccentricity:    0.0013772
Arg of perigee:    62.2623 deg
Mean anomaly:     298.0072 deg
Mean motion:   14.66570353 rev/day
Decay rate:      5.188e-05 rev/day^2
Epoch rev:           37763
```

```
Satellite: RS-10/11
Catalog number: 18129
Epoch time:      91087.84980366
Element set:     567
Inclination:       82.9242 deg
RA of node:       118.2301 deg
Eccentricity:    0.0013169
Arg of perigee:    54.1551 deg
Mean anomaly:     306.0829 deg
Mean motion:   13.72165370 rev/day
Decay rate:        9.7e-07 rev/day^2
Epoch rev:           18857

Satellite: AO-13
Catalog number: 19216
Epoch time:      91065.03461838
Element set:     240
Inclination:       56.8208 deg
RA of node:       107.0310 deg
Eccentricity:    0.7134717
Arg of perigee:   248.7854 deg
Mean anomaly:      25.7533 deg
Mean motion:    2.09700788 rev/day
Decay rate:       -2.0e-07 rev/day^2
Epoch rev:            2086

Satellite: FO-20
Catalog number: 20480
Epoch time:      91069.51316501
Element set:     189
Inclination:       99.0193 deg
RA of node:        70.4245 deg
Eccentricity:    0.0540988
Arg of perigee:   165.0177 deg
Mean anomaly:     196.7681 deg
Mean motion:   12.83171893 rev/day
Decay rate:        3.1e-07 rev/day^2
Epoch rev:            5090

Satellite: AO-21
Catalog number: 21087
Epoch time:      91087.14616669
Element set:      26
Inclination:       82.9427 deg
RA of node:       293.6967 deg
Eccentricity:    0.0036275
Arg of perigee:   122.5402 deg
Mean anomaly:     237.9267 deg
```

```
Mean motion:   13.74359194 rev/day
Decay rate:       2.89e-06 rev/day^2
Epoch rev:             789

Satellite: RS-12/13
Catalog number: 21089
Epoch time:      91083.72491363
Element set:      28
Inclination:       82.9293 deg
RA of node:       166.7116 deg
Eccentricity:    0.0029654
Arg of perigee:   151.3646 deg
Mean anomaly:     208.9150 deg
Mean motion:   13.73876059 rev/day
Decay rate:       2.92e-06 rev/day^2
Epoch rev:             654

/EX
SB KEPS @ AMSAT  $ORBS-089.D
Orbital Elements  089.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS
FROM N3FKV  HEWITT, TX     March 30, 1991
TO ALL RADIO AMATEURS BT

Satellite: UO-14
Catalog number: 20437
Epoch time:      91087.70628769
Element set:     320
Inclination:       98.6784 deg
RA of node:       167.6671 deg
Eccentricity:    0.0012203
Arg of perigee:    42.3198 deg
Mean anomaly:     317.9034 deg
Mean motion:   14.29009848 rev/day
Decay rate:      1.612e-05 rev/day^2
Epoch rev:            6149

Satellite: AO-16
Catalog number: 20439
Epoch time:      91087.18620936
Element set:     211
Inclination:       98.6768 deg
RA of node:       167.4050 deg
Eccentricity:    0.0012088
Arg of perigee:    48.9803 deg
Mean anomaly:     311.2447 deg
Mean motion:   14.29098619 rev/day
```

```
Decay rate:      1.527e-05 rev/day^2
Epoch rev:           6142

Satellite: DO-17
Catalog number: 20440
Epoch time:      91086.26097029
Element set:     211
Inclination:       98.6766 deg
RA of node:       166.5200 deg
Eccentricity:    0.0012095
Arg of perigee:    52.3672 deg
Mean anomaly:     307.8631 deg
Mean motion:   14.29168280 rev/day
Decay rate:      1.580e-05 rev/day^2
Epoch rev:           6129

Satellite: WO-18
Catalog number: 20441
Epoch time:      91086.44382880
Element set:     210
Inclination:       98.6739 deg
RA of node:       166.7423 deg
Eccentricity:    0.0012699
Arg of perigee:    51.3876 deg
Mean anomaly:     308.8507 deg
Mean motion:   14.29229004 rev/day
Decay rate:      1.569e-05 rev/day^2
Epoch rev:           6132

Satellite: LO-19
Catalog number: 20442
Epoch time:      91087.19266508
Element set:     212
Inclination:       98.6767 deg
RA of node:       167.5436 deg
Eccentricity:    0.0013001
Arg of perigee:    48.2439 deg
Mean anomaly:     311.9890 deg
Mean motion:   14.29306365 rev/day
Decay rate:      1.497e-05 rev/day^2
Epoch rev:           6143

/EX
SB KEPS @ AMSAT  $ORBS-089.W
Orbital Elements  089.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM N3FKV  HEWITT, TX     March 30, 1991
```

TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 91087.20021879
Element set: 718
Inclination: 99.1731 deg
RA of node: 98.7687 deg
Eccentricity: 0.0014218
Arg of perigee: 293.9234 deg
Mean anomaly: 66.0445 deg
Mean motion: 14.12919510 rev/day
Decay rate: 1.658e-05 rev/day^2
Epoch rev: 32408

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 91086.97583158
Element set: 562
Inclination: 98.5727 deg
RA of node: 113.2251 deg
Eccentricity: 0.0013806
Arg of perigee: 160.0598 deg
Mean anomaly: 200.1146 deg
Mean motion: 14.24017780 rev/day
Decay rate: 2.033e-05 rev/day^2
Epoch rev: 23499

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 91083.62243123
Element set: 464
Inclination: 82.5438 deg
RA of node: 127.5364 deg
Eccentricity: 0.0015019
Arg of perigee: 256.8532 deg
Mean anomaly: 103.0952 deg
Mean motion: 13.84460246 rev/day
Decay rate: 4.20e-06 rev/day^2
Epoch rev: 15898

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 91079.51407238
Element set: 714
Inclination: 82.5407 deg
RA of node: 81.9375 deg
Eccentricity: 0.0017539

```
Arg of perigee:   348.1699 deg
Mean anomaly:      11.9013 deg
Mean motion:   13.16915477 rev/day
Decay rate:        4.9e-07 rev/day^2
Epoch rev:           12732

Satellite: NOAA-11
Catalog number: 19531
Epoch time:      91088.21240260
Element set:     473
Inclination:       99.0216 deg
RA of node:        42.4460 deg
Eccentricity:    0.0011494
Arg of perigee:   196.6004 deg
Mean anomaly:     163.4793 deg
Mean motion:   14.12038892 rev/day
Decay rate:      2.006e-05 rev/day^2
Epoch rev:           12918

Satellite: MET-2/18
Catalog number: 19851
Epoch time:      91086.27035091
Element set:     418
Inclination:       82.5215 deg
RA of node:         2.8990 deg
Eccentricity:    0.0013536
Arg of perigee:   297.1198 deg
Mean anomaly:      62.8595 deg
Mean motion:   13.84098645 rev/day
Decay rate:       7.01e-06 rev/day^2
Epoch rev:           10472

Satellite: MET-3/3
Catalog number: 20305
Epoch time:      91083.78492777
Element set:     327
Inclination:       82.5503 deg
RA of node:        20.0872 deg
Eccentricity:    0.0016660
Arg of perigee:   355.5322 deg
Mean anomaly:       4.5673 deg
Mean motion:   13.15942710 rev/day
Decay rate:        4.3e-07 rev/day^2
Epoch rev:            6785

Satellite: MET-2/19
Catalog number: 20670
Epoch time:      91087.00799621
```

```
Element set:     163
Inclination:       82.5413 deg
RA of node:        63.3643 deg
Eccentricity:    0.0014875
Arg of perigee:   207.0448 deg
Mean anomaly:     153.0109 deg
Mean motion:   13.83930967 rev/day
Decay rate:       4.06e-06 rev/day^2
Epoch rev:            3777

Satellite: FY-1/2
Catalog number: 20788
Epoch time:      91087.59876210
Element set:     121
Inclination:       98.9489 deg
RA of node:       122.7652 deg
Eccentricity:    0.0015466
Arg of perigee:    46.6461 deg
Mean anomaly:     313.6037 deg
Mean motion:   14.01090103 rev/day
Decay rate:      -4.01e-06 rev/day^2
Epoch rev:            2892

Satellite: MET-2/20
Catalog number: 20826
Epoch time:      91087.78580277
Element set:     118
Inclination:       82.5194 deg
RA of node:         1.8190 deg
Eccentricity:    0.0014176
Arg of perigee:   103.2175 deg
Mean anomaly:     257.0610 deg
Mean motion:   13.83311453 rev/day
Decay rate:       6.50e-06 rev/day^2
Epoch rev:            2509

/EX
SB KEPS @ AMSAT  $ORBS-089.M
Orbital Elements  089.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM N3FKV  HEWITT, TX     March 30, 1991
TO ALL RADIO AMATEURS BT

Satellite: MIR
Catalog number: 16609
Epoch time:      91088.12594994
Element set:     344
```

```
Inclination:       51.6071 deg
RA of node:       333.5097 deg
Eccentricity:    0.0015537
Arg of perigee:   116.0173 deg
Mean anomaly:     244.2519 deg
Mean motion:   15.64886640 rev/day
Decay rate:     6.7853e-04 rev/day^2
Epoch rev:           29262

Satellite: HUBBLE
Catalog number: 20580
Epoch time:      91086.77285543
Element set:     403
Inclination:       28.4683 deg
RA of node:       242.6984 deg
Eccentricity:    0.0005687
Arg of perigee:   185.3941 deg
Mean anomaly:     174.6582 deg
Mean motion:   14.86980261 rev/day
Decay rate:     1.2573e-04 rev/day^2
Epoch rev:            5018

/EX
SB KEPS @ AMSAT  $ORBS-089.N
2-Line Orbital Elements  089.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM N3FKV  HEWITT, TX     March 30, 1991

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00  0  0 BBBBB.BBBBBBBB  .CCCCCCCC  00000-0  00000-0 0  DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10
1 14129U 83 58  B 91087.13157047 -.00000090  00000-0  99999-4 0  6439
2 14129  25.8083 153.6070 6004385 228.6767  61.5135  2.05883150 30580
UO-11
1 14781U 84 21  B 91087.59505918  .00005188  00000-0  94170-3 0  9472
2 14781  97.9121 135.3744 0013772  62.2623 298.0072 14.66570353377634
NOAA-9
1 15427U 84123  A 91087.20021879  .00001658  00000-0  91076-3 0  7186
2 15427  99.1731  98.7687 0014218 293.9234  66.0445 14.12919510324089
MIR
1 16609U 86 17  A 91088.12594994  .00067853  00000-0  67618-3 0  3447
```

```
2 16609  51.6071 333.5097 0015537 116.0173 244.2519 15.64886640292620
NOAA-10
1 16969U 86 73  A 91086.97583158  .00002033  00000-0  90085-3 0  5624
2 16969  98.5727 113.2251 0013806 160.0598 200.1146 14.24017780234998
RS-10/11
1 18129U 87 54  A 91087.84980366  .00000097  00000-0  99999-4 0  5670
2 18129  82.9242 118.2301 0013169  54.1551 306.0829 13.72165370188579
MET-2/17
1 18820U 88  5  A 91083.62243123  .00000420  00000-0  36624-3 0  4641
2 18820  82.5438 127.5364 0015019 256.8532 103.0952 13.84460246158985
AO-13
1 19216U 88 51  B 91065.03461838 -.00000020  00000-0  99999-4 0  2406
2 19216  56.8208 107.0310 7134717 248.7854  25.7533  2.09700788 20862
MET-3/2
1 19336U 88 64  A 91079.51407238  .00000049  00000-0  10968-3 0  7149
2 19336  82.5407  81.9375 0017539 348.1699  11.9013 13.16915477127322
NOAA-11
1 19531U 88 89  A 91088.21240260  .00002006  00000-0  11146-2 0  4735
2 19531  99.0216  42.4460 0011494 196.6004 163.4793 14.12038892129185
MET-2/18
1 19851U 89 18  A 91086.27035091  .00000701  00000-0  62028-3 0  4186
2 19851  82.5215   2.8990 0013536 297.1198  62.8595 13.84098645104729
MET-3/3
1 20305U 89 86  A 91083.78492777  .00000043  00000-0  99999-4 0  3274
2 20305  82.5503  20.0872 0016660 355.5322   4.5673 13.15942710 67852
UO-14
1 20437U 90  5  B 91087.70628769  .00001612  00000-0  65281-3 0  3203
2 20437  98.6784 167.6671 0012203  42.3198 317.9034 14.29009848 61491
AO-16
1 20439U 90  5  D 91087.18620936  .00001527  00000-0  61808-3 0  2110
2 20439  98.6768 167.4050 0012088  48.9803 311.2447 14.29098619 61422
DO-17
1 20440U 90  5  E 91086.26097029  .00001580  00000-0  63769-3 0  2118
2 20440  98.6766 166.5200 0012095  52.3672 307.8631 14.29168280 61293
WO-18
1 20441U 90  5  F 91086.44382880  .00001569  00000-0  63259-3 0  2101
2 20441  98.6739 166.7423 0012699  51.3876 308.8507 14.29229004 61327
LO-19
1 20442U 90  5  G 91087.19266508  .00001497  00000-0  60371-3 0  2127
2 20442  98.6767 167.5436 0013001  48.2439 311.9890 14.29306365 61438
FO-20
1 20480U 90 13  B 91069.51316501  .00000031  00000-0  97835-4 0  1895
2 20480  99.0193  70.4245 0540988 165.0177 196.7681 12.83171893 50905
HUBBLE
1 20580U          91086.77285543  .00012573  00000-0  13568-2 0  4033
2 20580  28.4683 242.6984 0005687 185.3941 174.6582 14.86980261 50182
MET-2/19
1 20670U 90 57  A 91087.00799621  .00000406  00000-0  35581-3 0  1633
```

2 20670 82.5413 63.3643 0014875 207.0448 153.0109 13.83930967 37777
FY-1/2
1 20788U 90 81 A 91087.59876210 -.00000401 00000-0 -25542-3 0 1211
2 20788 98.9489 122.7652 0015466 46.6461 313.6037 14.01090103 28921
MET-2/20
1 20826U 90 86 A 91087.78580277 .00000650 00000-0 58228-3 0 1182
2 20826 82.5194   1.8190 0014176 103.2175 257.0610 13.83311453 25095
AO-21
1 21087U   91087.14616669 .00000289 00000-0 29279-3 0   264
2 21087 82.9427 293.6967 0036275 122.5402 237.9267 13.74359194 7899
RS-12/13
1 21089U 91 7 A 91083.72491363 .00000292 00000-0 30027-3 0   284
2 21089 82.9293 166.7116 0029654 151.3646 208.9150 13.73876059 6544
/EX
--
Gary W. Sanders (gws@n8emr or ...!osu-cis!n8emr!gws), 72277,1325
N8EMR @ W8CQK (ip addr) 44.70.0.1 [Ohio AMPR address coordinator]
HAM BBS (1200/2400/9600/V.32/PEP/MNP=L5) 614-895-2553
Voice: 614-895-2552 (eves/weekends)

Date: 1 Apr 91 13:22:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: Cheap Iambic
To: info-hams@ucsd.edu

> in fact. I heard that there was an iambic keyer IC that just needed some
> support components and a key to run. Does anyone know where I can get one?

There is a small ad in the back 1/3 of QST most every month for the Curtis
keyer chip. Of course, the resulting keyer isn't going to have all the bells
and whistles unless you design them in with more chips, but you will certainly
have a good iambic keyer. Have at it!

steve - W3GRG

Date: 1 Apr 91 20:00:20 GMT
From: sdd.hp.com!zaphod.mps.ohio-state.edu!mips!twg.com!sawyer@ucsd.edu
Subject: Cook Islands
To: info-hams@ucsd.edu

In article <46276@ut-emx.uucp> oo7--a.k.a. AA5BT--writes:
>
>South Cook is a vacation spot with hotels and probably McDonalds every 100
>yards. North Cook is a bunch of rocks that are hard to reach and operate

>from. In the last 2-3 years I have worked at least a dozen S. Cook stations
>and only one N. Cook expedition (ZK1CQ and ZK1RS in Oct 89). I think one of
>the Scandinavian groups on a Pacific tour might have activated N. Cook
>sometime in 1990 too.
>
I sure hope the perfesser isn't completely right on this one. There was an operation on from North Cook last summer--either July or August--by the Japanese pearl diver YL, Kiyoko (sp?). I think the call was ZK1XK, but my records are at home so I can't be sure. I'm still waiting on my card from that one, and I checked with other DXer's in the Bay Area and none of them have received theirs either. The story I got is that Kiyoko just got back to Japan a month or so ago and has almost a year's backlog of cards to get out from all of her travels, so it may be a while.

But for the purpose of his post, Derek is right. If it were North (as opposed to South) Cook, you would know it.

Date: 1 Apr 91 20:23:43 GMT
From: sdd.hp.com!think.com!paperboy!hsdndev!bunny!dhp1@ucsd.edu
Subject: CQ WPX SSB score rumors
To: info-hams@ucsd.edu

CQ WPX SSB 1991 Score Rumors
(Gathered from 3830kHz after the contest)

Single-op, All-Band:

KM1H (KQ2M, op)   2896/914=6.856M
WM1K (KM3T, op)   2911/854=6.2M
NW3B   2507/835=5.39M
KA5W (KS1G, op)   2338/838=4.39M
K0RF   2125/819=4.36M
K3ZO   1709/709=3.3M
W2HPF   336/259=239k

Single-op, Single-Band:

VA3EJ 3.8MHz 1150/450=1.9M
KQ3V 3.8MHz 548/306=376k
NB1H 14MHz   1417/651=2.05M
WB5VZL 21MHz 1923/787=3.055M
WN4KKN 21MHz 2378/729=4.27M
N1IJM 21MHz 685k
NX1P 21MHz   960k
NX1H 28MHz   2004/715=3.1M

Single-op, All-Band Breakdowns:

	KM1H (KQ2M, op)		WM1K (KM3T, op)
	QSOs/Prefixes		QSOs/Prefixes
3.8MHz	178/74		42/22
7MHz	80/9	0/0	
14MHz	1004/375		685/348
21MHz	784/309		645/235
28MHz	850/144		1539/243
Totals:	2896/914		2911/848

--
Dave Pascoe | Internet: dhp1@gte.com
GTE/SCSD | UUCP: ...!gte.com!dhp1
KM3T/1 | Packet Radio: km3t @ ka2qhd.nj

Date: 1 Apr 91 16:14:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: DAK SW receiver
To: info-hams@ucsd.edu

Thanks to everyone who replied to my request for info about the DAK SW receiver. After reading the responses and seeing the problems that have been encountered, I decided against buying one as a gift for my (non-technical) father.

Warren KA1JL
warren_tuiskula@vos.stratus.com

Date: 1 Apr 91 16:10:23 GMT
From: news-mail-gateway@ucsd.edu
Subject: DR-590 Mailing
To: info-hams@ucsd.edu

If you forwarded a SASE to me for the ALPHA COPY of the 590 manual, it was mailed Saturday. Should you desire a copy of the final manual, please send an SASA with 3 dollars in postage. The manual will include schematics and board layouts. Quite a few improvements have been made since the last mailing. If you want to change the memory channels via the microphone:

1. Press VFO key
2. Enter C02 on the mic. Now your in memory mode.
3. To increase memory channel enter C08 to increase and C09 to decrease.

I am debating on sending the manual to Info-Hams, but right now on the apprehension side. What do the rest of you think, its 50 pages!

Jay (KA1SNA)

Date: 1 Apr 91 14:53:34 GMT
From: genrad!dls@husc6.harvard.edu
Subject: FAQ - Part 1
To: info-hams@ucsd.edu

1-Apr-91 08:11 dls update, see changebars (|)

The following is a monthly posting of frequently asked questions for hams. Due to the increasing size of this list, I've broken it into 3 Parts (and will break it further if necessary) to keep each Part under 10K bytes.

Part 1 - Beginning Amateur Radio questions
Part 2 - "Where can I find ..." questions
Part 3 - Common Advanced and Technical questions

If you have any questions you think should be added, please email to me at dls@genrad.com.

FREQUENTLY ASKED QUESTIONS
Part 1 - Beginning Amateur Radio questions

** What is Amateur Radio?

Amateur Radio is a non-commercial radio communication service whose primary aim is public service and communication between private persons. Amateur Radio operators are commonly called hams. It's great fun to talk to someone in Japan on the radio!

** Who can become a ham in the United States?

Anyone who is not a representative of a foreign government can be an Amateur Radio operator in the USA. There are tests that you must pass to get a license, however the tests are not insurmountable. There are 7-year-old hams and 80-year-old hams. There are many handicapped hams who get great enjoyment out of Amateur Radio.

** OK, so how do I become a ham in the United States?
There are now two entry-level class licenses in Amateur Radio. A Novice license requires passing a 30-question written test and a Morse code test given at 5 words per minute. A Technician license requires passing the 30-question written Novice test and a 25-question written Technician test, but no Morse code test. See local radio clubs or radio stores in your area for more information.

** Where can I locate information and books on Amateur Radio?
Your local Radio Shack sells some ham radios and Amateur Radio license books. Books can also be obtained through the mail from ham radio organizations, such as ARRL in Newington, CT (203-666-1541) and W5YI in Dallas, TX (1-800-669-9594). There may be one or two ham radio stores in the local area (ie, within 50 miles). Try looking in the Yellow Pages under Radio Communications. Be assured that once you get a callsign, the mail order ham radio companies will find you :-).
For the Novice license, get a Novice License manual, plus 5-word-per-minute Morse code tapes, costing around $25. For the Technician license, get a Novice License manual, a Technician License manual, and an FCC Rules manual, costing around $32.
| The FCC Rules manual is a good idea for Novice also, but not
| necessary, since the Novice License manual contains all the FCC
| Rules that are required for the Novice License.

** How much does it cost?
To take the Novice tests, it's free. To take the Technician or higher class tests, there is a small charge (around $5 currently) to cover copying costs and running the testing sessions. The cost of a radio is really dependent on what you want to do. You can make your own radio and antenna for under $150. You can buy a used single-band radio for $150-$300. Or you can buy a new multi-band multi-mode radio with all the doodads for $300-$3000. I'd suggest you learn more about ham radio, talk to local hams, find out what you want to do with ham radio first.

** Where can I take the tests?
The Novice tests can be given by any two qualified hams of General class license or above. The Technician tests and all higher class license tests are given by three qualified Volunteer Examiners (VEs) who volunteer their time.

|** What are the tests like?
| Each of the written tests (Novice, Technician, General, Advanced,
| and Extra) generally a multiple choice test of approximately one-
| tenth of the question pool. For example, if the question pool is
| approximately 300 questions, then the test will be a 30-question

| test. You need to get 75% correct to pass. Note that they truncate
| to determine the correct number of questions. That means for a 30
| question test, you need to get 22 right, which is actually only 73.3%.

| Once you've paid the small fee for Technician-Extra tests, it costs
| no extra to take another test, so I'd suggest you keep taking the
| next more advanced test until you fail. If you pass the written
| but not the Morse code (or vice versa) for a specific class license,
| you have up to one year to take the other test before you would have
| to retake the written test again. Note that some VEs will not allow
| you to take the written test unless you've first taken the Morse code
| test.

| The Morse code test is a receiving test only. The test run 5 to 7
| minutes. After the test, you are given a 10-question multiple-choice
| or fill-in-the-blank test. Passing grade is 7 or more. If you fail
| the 10-question test, the examiner team will examine your copy sheet
| to see if you have 1 minute of solid copy with no errors. For 5 wpm,
| that's 25 characters, for 13 wpm, that's 65 characters, for 20 wpm,
| that's 100 characters. If they can find 1 minute solid copy, you've
| still passed.

| Hints on Morse code tests: Generally, it will be a standard QSO
| (conversation), and it MUST contain at least one of each of the
| following:
| 26 letters A-Z, 10 numbers 0-9, comma (,), period (.), slant or
| slash (/), question mark (?), double dash prosign (BT), end of
| message prosign (AR), end of contact prosign (SK).
| The letters count as one character, all others count as two
| characters. There are a couple other prosigns which are worth
| knowing, but will not be on the test, like "I'm done talking, next"
| is K, "I'm done talking, back to you" is KN, "Please wait" is AS.

** Where can I find VE sessions in my local area?
VE sessions are often announced in the local newspapers, but more
often, they are announced by local radio bulletin boards. The
local packet BBS will most likely have a monthly updated schedule
for VE sessions. ARRL or W5YI can generally be called and asked for
local VE sessions as well. Don't forget that you will need the
following when you go in for an upgrade: a copy of your current
Amateur license; your original Amateur license; any CSCEs (duplicate
not required), if applicable and less than a year old; a picture ID,
preferably a driver's license, passport or visa; and the VE test
fee (approximately $5 right now).

** What can I do with a ham radio license?
There are so many things, it's a difficult question to answer, but
here's some ideas:

* Talk to people in foreign countries.
* Talk to people (both local and far away) on your drive to work.
* Help in emergencies by providing communications.
* Provide communications in parades or walkathons.
* Help other people become hams.
* Hook your computer to your radio and communicate by computers.
* Collect QSL cards (cards from other hams) from all over the United States and foreign countries and receive awards.
* Participate in contests or Field Day events.
* Provide radio services to your local Civil Defense organization thru ARES (Amateur Radio Emergency Service) or RACES (Radio Amateur Civil Emergency Service).
* Have someone to talk to on those sleepless nights at home.
* Receive weather pictures via satellites.
* Build radios, antennas, learn some elctronics and radio theory.
* Talk to astronauts in space, or use the moon to bounce signals back to people on the Earth.
* Experiment with Amateur TV (SSTV) or send still-frame pictures by facsimile.
* Experiment with amateur satellite communications.

** What can't I do with an Amateur Radio license?

The most important thing you can't do is transact business of any kind over ham radio. Interference to other hams or services, as well as obscene, profane or indecent language is not tolerated and is illegal. Music and broadcasting is not allowed on ham radio.

** I'm interested, who will help me?

There are hams who are willing to become "Elmers" (mentors, helpers) in your local area. Look around and ask local hams. Search out local radio clubs. As well, some people have volunteered to be an Elmer over the Usenet. Paul has volunteered to maintain that list. If anyone wants to be an Elmer, or needs an Elmer, email him:

Paul W. Schleck, KD3FU, acmnews@zeus.unomaha.edu

|** Should I build my own equipment?

| "Homebrewing" is a fun and educational part of ham radio. It is a thrill to build your own transmitter and put it on the air. However, building your own receiver can be quite complicated; if you don't have electronics experience, you may want to buy a receiver instead. Most homebrew transmitters are QRP (transmit very low power). That's fine for an experienced ham with a very good antenna, but a Novice ham will just get frustrated. Your first rig, therefore should NOT be a home-brew.

|** Should I build my own antenna?

| Most hams build their own antennas for base station use and buy antennas for mobile (car) use. Most beginner ham books describe how

| to build different types of antennas. Order of difficulty, from
| easiest to more difficult, for some common antennas are: wire dipole,
| Zepp, Yagi, Quad.

|** Do I need a huge antenna and tower like my neighbor?
| No! Large beam antennas and 40-foot towers are very expensive. As
| a beginner, a simple dipole antenna is perfectly adequate. As you
| gain experience (and money :-), you may want to invest in something
| bigger.

|** Where do I buy equipment?
| If you can afford new rigs, there are many mail order stores that
| advertise in ham radio magazines. If you want to buy a used rig,
| the best place is at a "hamfest" (ham flea market). You should take
| along an experienced ham, since some of the used equipment may be
| inoperative, overpriced or poor quality. You can also answer ads
| in ham magazines or posted at ham radio stores, although often, by
| the time you call, the equipment has already been sold.

->Diana L. Syriac   dls@genrad.com   Ham: KC1SP (Sweet Pea)   <-
->I'D RATHER BE FLYING! P-ASEL, INST   CAP: 1LT, Freedom 690 Mobile<-
->GenRad   AD ASTRA, PER ASPERA   <-
->MS/6, 300 Baker Ave, Concord, Mass. 01742   (508) 369-4400 x2459   <-

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Date: 1 Apr 91 21:02:59 GMT
From: sdd.hp.com!zaphod.mps.ohio-state.edu!sol.ctr.columbia.edu!
cunixf.cc.columbia.edu!cunixb.cc.columbia.edu!mig@ucsd.edu
Subject: Feed lines
To: info-hams@ucsd.edu

In article <1991Mar29.230503.14290@informix.com> randall@informix.com (Randall
Rhea) writes:
>In article <1991Mar29.044134.613@bradley.bradley.edu> moodyblu@buhub.bradley.edu
(Matthew Weisberg) writes:
>>However, I am trying to figure out how I am going to get the feedline into
>>the house. My landlord will not let me make another hole in the wall, so I
>>was thinking about bringing it in through the same hole the CATV line comes
>>in. Will this create any problems with the cables so close?? Does anyone
>>have any better ideas on how to get a feedline inside without making new
>>holes in the wall?? Thanks..
>Have you considered using ladder line? Since it's very thin, I just squish
>it under the window, and close the window right on top of it.
Make sure that there is no metal on the window sash or window, though. Ladder
line won't work well near metal. Coaxial cable isn't bothered by nearby metal
, so what I do is run my coaxial cables and ground wires between my window
and window sash. Then, find some way of fastening the window so that you can

use it in an emergency, etc, but make sure that (if you live near groun
level) noone can get IN. Finally, use foam strips to insulate the opening and
prevent hot/cool air from escaping.

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>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
>Randall Rhea                                          Informix Software, Inc.
>Senior Programmer/Analyst, MIS                    uunet!pyramid!infmx!randall
 * * * * * * *  ======================= Meir Green
* * * * * * * * ======================= mig@cunixb.cc.columbia.edu
 * * * * * * *  ======================= N2JPG
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Date: 1 Apr 91 17:58:33 GMT
From: news-mail-gateway@ucsd.edu
Subject: Kuwait Ham
To: info-hams@ucsd.edu

There has been some good news concerning 9K2KW, Farid
safety. I worked Sam A41 in Oman last week. He stated that
Farid has returned to Kuwait and has been heard on 75 Meters.

Farid is well and will be on 20 Meters soon. If anyone
contacts Farid, 9K2KW, tell him that I will be listening on
14243 mhz at 2300Z on Mondays. I am net control for the IARS
DX Net on Mondays.

TNX,KZ2X

Bob

Date: 1 Apr 91 15:46:03 GMT
From: swrinde!zaphod.mps.ohio-state.edu!rpi!news-server.csri.toronto.edu!utgpu!
cunews!bnrgate!bmers95!bmerh27!chatel@ucsd.edu
Subject: large 110->220 transformers
To: info-hams@ucsd.edu

Hi,

I have found the address of the place I got my 220V/110V
transformer from:

KNAPCO
1201 Hamlet Ave.
Clearwater, Florida
34616

Order Hot line: 800-827-4718
Other phone: 813-449-0019

I got their name from an advertisement in BYTE magazine.

Regards,
Marc.

Date: 1 Apr 91 19:02:46 GMT
From: chiles.slisp.cs.cmu.edu!chiles@pt.cs.cmu.edu
Subject: Licensing Philosophy?
To: info-hams@ucsd.edu

A friend was asking me the other day why one must learn some basic electronics to obtain a amateur radio license. I immediately thought about a body of skilled operators and technicians to push the state of the art and help out in communication emergencies, yada yada yada, and I thought about inducing self-respect and arrogance to support professional behavior on the air.

Then he made two more points: with the state of modern gear, one or two can fix their own rigs without a factory, and the rigs do everything. The other point was that the government doesn't restrict the public's access to operating motor vehicles to those who demonstrate basic mechanic's skills. That is, the government doesn't believe you need to know how carburators, exhausts, fuel injection, air conditioning, etc., work to be a responsible vehicle operator without interfering with others on the roadways. Why then must a radio operator know about the internals of his gear to obtain access to the airwaves? Let's assume there is some restriction that is valid in licensing radio operation, and then I want to know if knowledge of basic electronics is such a valid restriction.

I have a feeling you need to know some basics to put up an antenna and to keep from blowing your finals. You need to know enough to prevent overmodulation or too much compression on voice. Maybe you need to know enough to tell others they have chirp, but if they aren't going to modify or fix their own gear, why do they need to know what causes chirp? Sure, most of us are into this hobby because we care about these details, but some may just want to meet people from around the world and our own country to chat with them. They don't care about technology. I don't know anything about a no-code license I've heard rumored, but what if the FCC offered a no-theory license for some ham allocations with a restriction that you operate gear with certain features, those which allow you to turn on the rig and go except for a quick check of the SWR meter. Maybe these rigs have built in detectors that disallow operation if the SWR is too high, so the electronically naive won't blow their finals.

On the other hand, no one needs to know this. You can always pay someone to put up your antenna, to fix your TVI problems when neighbors complain, etc. If you can't afford such luxuries, or if you like doing things yourself (as I supposed most hams do), you can learn how.

So, what is the philosophy behind the government's rulings on access to certain frequencies? Is the technical restriction archaic? If the government wants a ready body of technical radio operators for wars, then it could provide scholarships for students to pursue this knowledge. I also realize the sentiment that CBers behaved like hyper adolescents (please excuse taint of ageism), and they aren't required to know anything or do not have peer pressure to behave professionally. I believe this is incidental, and I ask why a modern ham needs a knowledge of electronics to be a responsible operator.

Just thinking too much I suppose ....

Bill

Date: 1 Apr 91 21:49:54 GMT
From: sdd.hp.com!zaphod.mps.ohio-state.edu!magnus.acs.ohio-state.edu!csn!ub!bowen@ucsd.edu
Subject: new callsign server features
To: info-hams@ucsd.edu

In article <9104011356.AA24382@enuxha.eas.asu.edu>, crawford@enuxha.eas.asu.edu (Brian Crawford) writes:
|> And the address

See the Frequently Asked Questions list part 2 just posted for full information about accessing the server.

Devon

Date: 1 Apr 91 18:49:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: NoCode Tech and Liscense in Peru
To: info-hams@ucsd.edu

A quick question for the group. I have a friend who lives in Peru, and is in the states for about 9 months. He is interested in getting a US ham liscense while here and then getting a Peruvian liscense when he gets back there. Will the nocode tech allow him to get a Peruvian liscense

with SSB hf privledges? If no one is sure, where would be the best place
to find out? ARRL?

thanks

Bruce Harrison WB4MJG
Univ. of Tennessee at Martin
BRUCEH@UTKVX   (bitnet)

Date: 1 Apr 91 21:26:25 GMT
From: sdd.hp.com!zaphod.mps.ohio-state.edu!sol.ctr.columbia.edu!
cunixf.cc.columbia.edu!cunixb.cc.columbia.edu!mig@ucsd.edu
To: info-hams@ucsd.edu

References <9C44BAE82EFF600437@uncg.bitnet>,
<1991Mar27.203003.11457@cunixf.cc.columbia.edu>, <2643@ke4zv.UUCP>lumb
Reply-To : mig@cunixb.cc.columbia.edu (Meir)
Subject : Re: a few fundamental questions about RF signals

In article <2643@ke4zv.UUCP> gary@ke4zv.UUCP (Gary Coffman) writes:
>In article <1991Mar27.203003.11457@cunixf.cc.columbia.edu>
mig@cunixb.cc.columbia.edu (Meir) writes:
>>What about putting a transformer and an audio transducer on an HF or MF or LF
>>rig? Could we have QSOs using ultrasonics?
>Yes. The Navy routinely uses such systems. Ultrasound is very short range
>in air, much better in water, and fantastic along a stretch of *welded*
>railroad rail.
>With a 10 watt LF transmitter matched to a piezo tweeter on one end, and a
>LF receiver fed by a ceramic phono cartridge on the other, very good SSB
Do you think there is a way to get my TS-430S to load a transducer at, say,
160m? Is there any regulation of ultrasonics in various mediums? Is this
dangerous to animal life in the medium? Could we have a SSB QSO through the
ocean, using ultrasonics?

>Gary KE4ZV
 * * * * * * * ======================== Meir Green
* * * * * * * * ======================== mig@cunixb.cc.columbia.edu
 * * * * * * * ======================== N2JPG

Date: 1 Apr 91 22:36:05 GMT
From: sdd.hp.com!zaphod.mps.ohio-state.edu!think.com!linus!linus!mwunix.mitre.org!
m21198@ucsd.edu
To: info-hams@ucsd.edu

References <1991Mar29.044134.613@bradley.bradley.edu>,
<1991Mar29.230503.14290@informix.com>,
<1991Apr1.210259.17754@cunixf.cc.columbia.edu>2
Subject : Re: Feed lines

One simple way to block entry via a partially opened window is to drill a very small hole in the area where the upper and lower sashes overlap. Drop in a large nail and it is locked in place. This is an old, old trick, and seems to work very well.

End of Info-Hams Digest
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